significantly (p<0.01) higher rates of outpatient visits, ambulatory surgical center visits, physical therapy visits, anti-depressant use and ED prescription use compared to controls. Compared with their controls, Medicare PD patients had on average significantly higher risk-adjusted all-cause outpatient costs ($5,322 vs. $3,162) and annual all-inclusive health care costs ($10,675 vs. $7,926); risk-adjusted annual total all-cause costs for the commercial cohort were $10,463 vs. $5,918 (all p<0.0001). **CONCLUSIONS:** PD patients had higher comorbidity rates, utilization, and annual total costs compared with matched controls.

PIH22

INCREMENTAL HOSPITAL COSTS ASSOCIATED WITH COMORBIDITIES OF PREMATURITY

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OBJECTIVES: Hospital costs for newborns are indirectly associated with gestational age (GA) at birth. The higher costs of prematurity are primarily a function of the presence of clusters of comorbidities. The objective of this study was to explore the incremental costs associated with having neonatal comorbidities of prematurity, and whether stable cost estimates can be derived for use in economic evaluations. **METHODS:** Our analyses included 4292 hospital records from infants (23-37 wks GA) born to mothers with uncomplicated singleton pregnancies in spontaneous preterm labor at the Medical University of South Carolina from 2001-2010 . Thirteen comorbidities associated with prematurity were identified: respiratory distress syndrome (RDS), bronchopulmonary dysplasia (BPD), sepsis, meningitis, necrotizing enterocolitis (NEC), intraventricular hemorrhage I & II and III & IV (IVH I/II & IVH III/IV), periventricular leukomalacia (PVL), anemia, apnea, retinopathy of prematurity requiring surgery (ROP), convulsions, and brain injury (PVL/CPV). To estimate incremental cost of each, adjusted for other comorbidities and GA, we transformed the data and implemented a partial least squares model, with 10 fold-cross validation of the full model. **RESULTS:** Transformation of the data and implementation of the partial least squares model eliminated collinearity issues in the data leading to stable incremental cost estimates, Q^2=0.69. The model was found to be stable under bootstrapping. Cost outliers were retained in the model as the incremental costs estimates were stable and the model had good predictability when they were retained. Incremental costs ranged from $23,121 (ROP) to $4,529 (convulsions). **CONCLUSIONS:** In addition to GA at birth, these 13 comorbidities of prematurity impact total hospital costs of premature infants. This study provides reliable estimates of the incremental cost associated with comorbidities of prematurity, controlling for GA at birth, to be used in future economic analyses of the cost associated with premature birth due to spontaneous preterm labor.

PIH23

BURDEN OF UNINTENDED PREGNANCIES TO PUBLIC HEALTH SYSTEM IN BRAZIL

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OBJECTIVES: To estimate the economic burden of unintended pregnancy in the perspective of public payer and the impact of UP on related public health measures in Brazil. **METHODS:** A decision-analysis cost model was constructed based on pregnancy rates, probabilities and costs of pregnancy and neonatal outcomes (miscarriage, induced abortion, and live birth) in Brazil. The model took account of both maternal and child outcomes, and accounted for health care costs related with preterm birth, neonatal admission, cerebral palsy, neonatal and maternal mortality. All costs are reported as Real$ (Brazilian currency). **RESULTS:** In Brazil there were 1.8 million unintended pregnancies in 2010. Those unintended pregnancies resulted in 159,151 miscarriages, 48,769 induced abortions, and 1.58 million live births. It was estimated there were 312 maternal deaths. The number of infant deaths within the 12-months following birth was estimated at 32,864. The total health care costs to public payer attributed to unintended pregnancies are estimated to be R$4.1 billion in one year of which R$4.07 billion (99.2%) attributed to births and resulting complications and R$32 million (0.8%) was attributed to miscarriage. The average cost per UP was R$2,293. **CONCLUSIONS:** Unintended pregnancies impose substantial burden on the Brazilian society in term of health care costs, infant and maternal morbidity and mortality. Reduction in UPs will not only generate substantial cost-savings, but also improve public health profile of the country. Public policymakers should allocate budget on cost-effective pregnancy prevention interventions to address this issue.

PIH24

BENEFIT OF POSITIVE AIRWAY PRESSURE (PAP) THERAPY IN PATIENTS WITH SLEEP APNEA (SA) IN GERMANY: A RETROSPECTIVE COMPARATIVE COHORT ANALYSIS BASED ON A STATUTORY HEALTH INSURANCE DATABASE

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OBJECTIVES: Sleep apnea (SA) is relatively common, occurring in about 2–4% of the general population. This study investigated the effects of PAP therapy on morbidity (including comorbid disease), all-cause mortality, and costs in patients with SA. A statutory health insurance (SHI) perspective was taken. **METHODS:** A total of approx. 4 million individuals covered by the SHI database were analysed (ca. 5% of the German SHI population). PAP therapy was initiated in 4068 patients with SA. Propensity score was used to define a control group of 4068 SA patients matched for age, sex, risk factors/etiology, region and medication who received usual care (no PAP). Patients were followed after therapy initiation over three years. **RESULTS:** During the first two years' follow-up, hospital admissions were significantly lower in controls (p<0.0001 vs PAP for both years); number of admissions was 5,323 in the control group and 6,931 in the PAP group. Conversely, in year 3 of follow-up, the number of inpatient treatments was significantly lower in the PAP vs control group (1,525 vs 2,000; p<0.0001). Total cost of illness was higher in the PAP group compared with controls (year 1: €6,704 vs €5,015 [p<0.0001]; year 2: €5,272 vs €4,901 [p<0.001]; year 3: €5,091 vs €4,830 [p<0.001]). Recipients of PAP therapy had a significantly lower 3-year mortality rate compared with controls (4.5% vs 7.2%; p<0.0001; relative risk reduction 37.5%). **CONCLUSIONS:** SA patients with PAP therapy showed a significantly reduced mortality and morbidity. Also, the data showed that treatment may begin to have beneficial effects on the hospitalisation rate after 2 years of treatment. Costs of PAP remained higher than control over the first 3 years of therapy, although the difference between treatment groups reduced over time. A follow-up period of ≥5 years may be required to show beneficial economic outcomes in SA patients receiving PAP therapy.

PIH25

PSYCHIATRIC HEALTH CARE UTILISATION AND RELATED COSTS IN NEWLY DIAGNOSED PATIENTS WITH AUTISM SPECTRUM DISORDER (ASD) IN QUEBEC (CANADA)

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OBJECTIVES: To characterize psychiatric health care utilization and its related costs in a cohort of newly diagnosed ASD individuals. **METHODS:** A cohort was built using the provincial public health care insurance program (RAMQ) databases. Newly diagnosed subjects with ASD were selected (≥ 2 diagnoses (separate dates) with ICD-9 codes: 299.X, excluding 299.2) between January 1998 and December 2010. Cohort entry was the date of first diagnosis confirmed by the absence of ASD diagnosis in previous 5 years. Participants aged ≥ 26 years or those not covered by the RAMQ drug plan in the year preceding cohort entry were excluded. Demographic and clinical patient characteristics were done at cohort entry. Health care utilisation associated with a psychiatric diagnosis (physician and emergency room visits, hospitalisations), psychoactive drug use (anticonvulsants, antipsychotics, antidepressants, anxiolytics, ADHD drugs) and total cumulative costs were assessed across 5 years of follow-up. **RESULTS:** A number of 1227 patients among the total cohort had 5 years of follow-up (male: 80.3%; median age: 7 years). In the 1-year following diagnosis, the mean number of visits to general practitioners was 1.6 whereas psychiatry related visits to specialists were 7.2 which decreased over time. Psychoactive drug utilisation was initially present in 49.3% of participants, and increased to 53.2% at 5 years. The psychiatric hospitalization rate was 10.4% in the 1-year of follow-up with the highest rates seen in adolescents (20%) and young adults (24%). Cumulative costs of psychiatric health services and psychoactive drugs at 1-year of follow-up were $547,568CAD and $600,433CAD, respectively. Those costs were at $216,827CAD and $934,381CAD at 5-years. **CONCLUSIONS:** While cost related to psychiatric health care services decreased by more than half in the 5 years of follow-up, drug costs rose by 56%. Access to long term care and monitoring among the ASD population is discussed.

PIH26

ANALYSIS OF TREATMENT COST FOR ENDOMETRIOSIS IN UKRAINE

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OBJECTIVES: Endometriosis takes the third place in the structure of the gynecological pathology after inflammatory diseases of the female genital organs and uterine fibroids. Endometriosis is most commonly diagnosed in women between 30 and 40 years of age - reproductive and functional age. The aim of the study was to calculate the average cost of hormonal therapy of endometriosis in Ukraine for a minimum period of 6 months, considering that the main aim of this therapy is the elimination of two major problems such as endometriosis-associated pain (dysmenorrhea, dyspareunia, chronic pelvic pain, ovulation-related pain, dyschezia) and infertility. **METHODS:** We analyzed the cost of treatment hormones per patient for course. We used the real data from medical records of patients who were treated in a regional perinatal center in Lviv. We have analyzed almost 150 stories diseases for 2012-2013. We used the prices from Ukrainian database of Morion company (Kiev) on 01.01.2014 (1 USD =8,24 UAH). **RESULTS:** In Ukraine for treatment of endometriosis often use these three alternative treatment hormonal schemes. We calculated the costs for course per patient in 6 months duration. The treatment costs are Dydrogesterone (tab. 10 mg №20) - 345 USD (2843 UAH); Dienogest (tab. 2 mg №28) - 550 USD (4530 UAH); Triptorelin (powder for susp. for injection 3,75 mg) - 1347 USD (11097 UAH). **CONCLUSIONS:** The alternative hormonal treatment schemes of endometriosis are differences 4 times per 1 patient for 6 months duration. Almost patient fully pay costs out of pocket, through this treatment costs are quite high for Ukrainian women. These results support the need to provide some state funding for the treatment of endometriosis and introduction the reimbursement system for hormonal medicine in Ukraine.

PIH27

THE COST-EFFECTIVENESS OF POSITRON EMISSION TOMOGRAPHY (PET): A SYSTEMATIC REVIEW ACROSS MULTIPLE INDICATIONS

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OBJECTIVES: To review the cost-effectiveness literature evaluating positron emission tomography (PET) imaging. **METHODS:** We systematically searched the PubMed database and the Tufts Medical Center Cost-Effectiveness Analysis Registry to identify studies evaluating the economics of PET imaging. We categorized each study with respect to indication, i.e., cardiology, neurology, oncology, and other. We extracted data pertaining to: the date of publication; the region in which the